

This listing of claims will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. **(Original)** A method for the determination of the location of a mobile station (MS) equipped with embedded GPS signal reception capability and equipped to operate within a wireless communications network, the method comprising:

(a) receiving GPS data at a land station, said GPS data being received from a MS to be located;

(b) at a land station equipped with location-measurement facilities, receiving a communications-band signal from said MS to be located and using the location-measurement facilities to extract location-related characteristic data from the communications-band signal; and

(c) at a land station equipped for location-determination calculations, performing location-determination calculations using the GPS data and the extracted location-related characteristic data to derive an estimated location for the MS.

2. **(Previously presented)** A method as recited in claim 1, further comprising providing assistance data to the MS to be located, said assistance data enhancing the ability of the MS to receive GPS signals and extract TOA or pseudorange measures, wherein said TOA or pseudorange measures are then communicated to the said land station equipped with location-measurement facilities.

3. **(Original)** A method as recited in claim 1, further comprising communicating the GPS data and the extracted location-related characteristic data to said land station equipped for location-determination calculations.

4. **(Original)** A method as recited in claim 1, wherein said location-related characteristic data extracted from the communications-band signal includes time of arrival (TOA) data.

5. **(Original)** A method as recited in claim 1, wherein said location-related characteristic data extracted from the communications-band signal includes time difference of arrival (TDOA) data.

6. **(Original)** A method as recited in claim 1, wherein said location-related characteristic data extracted from the communications-band signal includes angle of arrival (AOA) data.

7. **(Original)** A method as recited in claim 1, wherein said location-related characteristic data extracted from the communications-band signal includes data concerning signal strength or propagation loss (PL).

8. **(Original)** A method as recited in claim 1, wherein said location-related characteristic data extracted from the communications-band signal includes timing advance (TA) data.

9. **(Original)** A method as recited in claim 1, further comprising using collateral information in performing said location-determination calculations.

10. **(Original)** A method as recited in claim 1, wherein said method is employed to achieve applicable Federal Communications Commission (FCC) accuracy requirements for E-911.

11. **(Previously presented)** A system for the determination of the location of a mobile station (MS) equipped with embedded GPS signal reception capability and equipped to operate within a wireless communications network, comprising:

(a) means for receiving GPS data for use in location-determination calculations, said GPS data being received from a MS to be located;

(b) a land station equipped with location-measurement facilities and a receiver for receiving from said MS to be located a wireless communications-band signal and using the location-measurement facilities to extract location-related characteristic data from the communications-band signal; and

(c) a land station equipped for location-determination calculations, including a processor for performing location-determination calculations using the GPS data and the extracted location-related characteristic data to derive an estimated location for the MS.

12. **(Original)** A system as recited in claim 11, further comprising means for communicating the GPS data and the extracted location-related characteristic data to said land station equipped for location-determination calculations.

13. **(Original)** A system as recited in claim 11, wherein said location-related characteristic data extracted from the communications-band signal includes time of arrival (TOA) data.

14. **(Original)** A system as recited in claim 11, wherein said location-related characteristic data extracted from the communications-band signal includes time difference of arrival (TDOA) data.

15. **(Original)** A system as recited in claim 11, wherein said location-related characteristic data extracted from the communications-band signal includes angle of arrival (AOA) data.

16. **(Original)** A system as recited in claim 11, wherein said location-related characteristic data extracted from the communications-band signal includes data concerning signal strength or propagation loss (PL).

17. **(Original)** A system as recited in claim 11, wherein said location-related characteristic data extracted from the communications-band signal includes timing advance (TA) data.

18. **(Original)** A system as recited in claim 11, further comprising using collateral information in performing said location-determination calculations.

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19. **(Original)** A system as recited in claim 11, wherein said system achieves applicable Federal Communications Commission (FCC) accuracy requirements for E-911.

20. **(Previously presented)** A method as recited in claim 11, further comprising providing assistance data to the MS to be located, said assistance data enhancing the ability of the MS to receive GPS signals and extract TOA or pseudorange measures, wherein said TOA or pseudorange measures are then communicated to the said land station equipped with location-measurement facilities.